IV. UTILITY SERVICE PLAN ELEMENT

A. Introduction

The Municipal Land Use Law provides for the preparation of a Utility Service Plan Element analyzing the need for and showing the future general location of water supply and distribution facilities, drainage and flood control facilities, sewerage and waste treatment, solid waste disposal and provision for other related utilities, and including any storm water management plan required pursuant to the provisions of P.L. 1981, c.32 (C.40:55D-93 et seq.)

This Utility Service Plan Element provides a 2021 review of Utility Services in the Township of Florence.

B. Township of Florence Water and Sewer Development History

Historically, the Township of Florence traditionally had two major population centers: the downtown Florence area and Roebling Village. Roebling Village was the site of the former John A. Roebling Steel Company which, in the 1900's installed water mains and sewer lines to service the community of plant employees required for its manufacturing operations. During the 1930's water and sewer lines were constructed throughout the Township, wells were drilled, and a sewage treatment plant was constructed at its present location at 1500 Front Street.

Two new wells for potable water supply and additional treatment units at the sewage treatment plant were added in the 1950's and in the late 1960's, a one million gallon elevated water storage tank was constructed on Cedar Lane. A partial upgrade of the existing water distribution system began in 1983 to relieve pressure deficiencies in existing service areas. The sewage treatment plant was expanded to a capacity of 1.5 MGD in 1979 and in 2000, the plant was upgraded, increasing the plant to its present capacity of 2.5 MGD. The water plant was upgraded in 1988 with a lime treatment process designed to eliminate corrosive conditions. In 1994, instrumentation to automate certain plant functions was added and a fifth well was constructed. Water tower #2 was constructed in 2000 and well #6 was drilled in 2008. An upgrade to the Water Treatment Plant began with Phase 1 in 2018 and Phase 2 will be completed in 2021.

C. Water Supply and Distribution Facilities

1. Water Supply and Water Service Area

Florence Township benefits from its close proximity to the Delaware River which supplies potable water from wells that are located within 2,000 feet from the river and the water treatment plant located at Sixth and Summer Streets. The Sewer and Water Department maintain six wells that are drilled into the Potomac-Raritan-Magothy (PRM) aquifer. Since the PRM aquifer is recharged from the Delaware River, an abundant quantity of good quality water is available from relatively shallow wells.

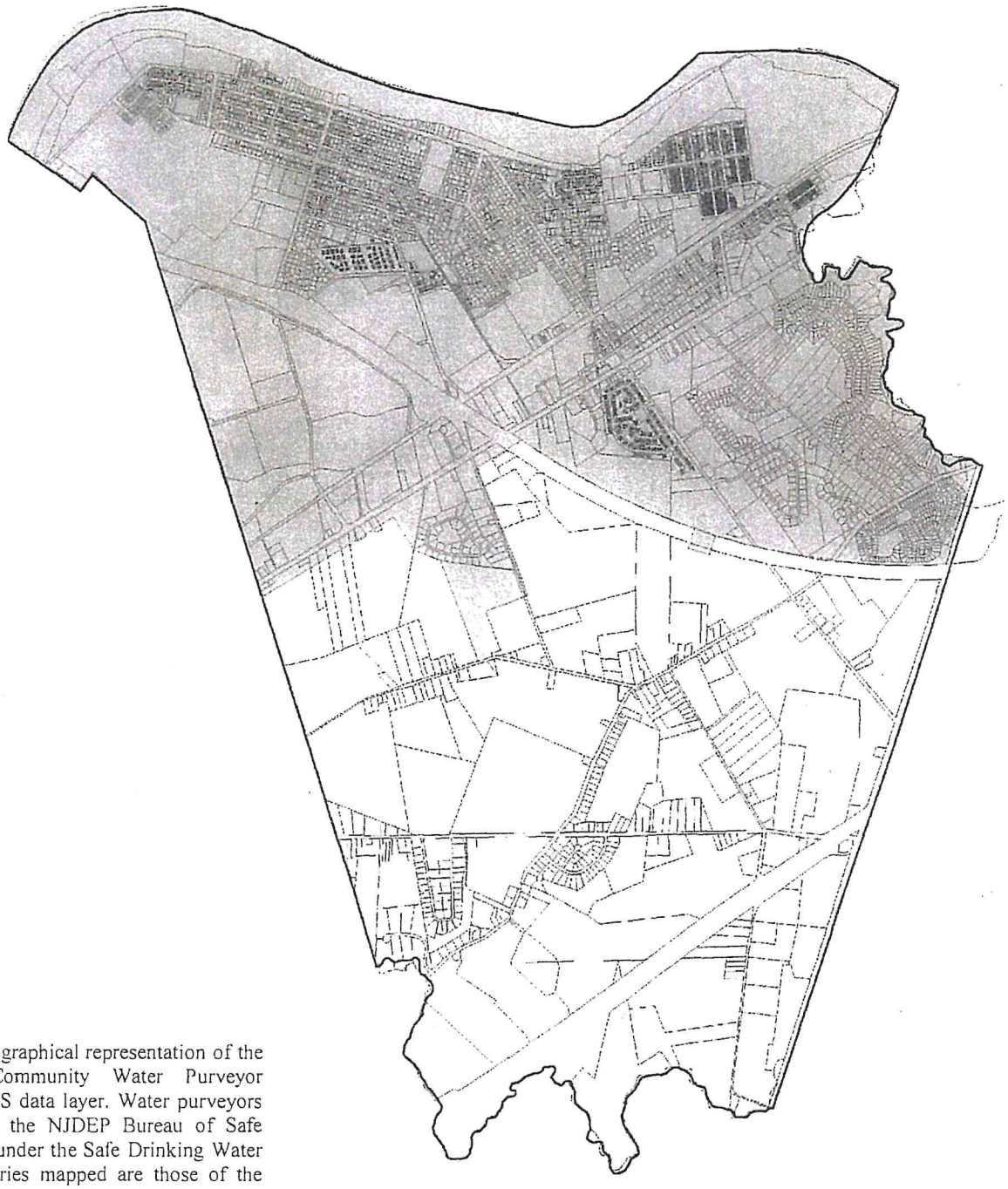
The current water service area is shown on ***Figure IV-1. Existing Water Service Area Map***. As shown, areas of the Township north of the Pennsylvania Extension of the New Jersey Turnpike are within the water service area. On the western side of the Township, west of the Pennsylvania Extension of the New Jersey Turnpike, all parcels north of US Route 130 are within the water service area as are the frontages of US Route 130 lots south of US Route 130, eastward to a 30' water and sewer easement to service Tall Pines. At this point, the entirety of the lots eastward to Burlington-Florence Road, the Tall Timbers development, and the Board of Education High School property on Burlington and Bustleton Road.

Florence Township Water and Sewer Director David Lebak, indicated that potable water service is provided for the entirety of the lots fronting on US Route 130. The properties are situated within Block 160.01 and include Subaru Distribution and Training Center, Express Scripts, QPSI Quality Packaging Specialists International and Burlington Stores Headquarters, the water mains reach the rear of the property. So for the Route 130 properties on the western side of the Township, the water service area is greater than shown on ***Figure IV-1***.

Figure IV-2. Future Water Service Area Map dated February 15, 2007 shows the entire Township with the exception of the southeastern end of the township, south of I-295 within a Future Water Service Area. ***Figure IV-3. Future Water Distribution System Improvements,*** dated March 5, 2007 shows proposed distribution lines through the proposed water service area. Finally, ***Figure IV-4. Water Distribution System Map, October 1993, Last Revised March 2018.*** shows the NFI Subaru warehouse, Phase I connected to the public water distribution system. Phase 2 of that building appears to also be connected to public water but the building is noted as "Private System." A NFI Building to the east is noted as To be Constructed but it is connected to the water main from US Route 130 that services the southern portion of Tall Timbers. The NFI Express Scripts building south of the NFI building to be constructed shows a connection to that water line, however, the building is also noted as "Private System." The Township indicated that the buildings are so noted because the Township has always considered any piping that feeds large warehouse/industrial sites to be private. That means, the owner is responsible for maintenance and repairs for on-site mains, piping, valves, and hydrants from the point at the valve on the Township main and the point of the sewer connection, all the way in to the building. The Burlington Coat headquarters does have their own supplemental well on site for irrigation purposes only.

2. Existing Flow Estimates

Existing flow rates were estimated based on measurements at the Florence Township Water Treatment Plant. An average peak daily demand of 2.04 MGD was measured over the course of 2019. The committed peak daily demand, which incorporates the demand of presently approved connections to the system for new development, was recorded as 2.39 MGD. The water allocation permit for the Florence Water Treatment Plant limits daily potable water flows to 2.64 MGD. Therefore, present peak daily demand consumes 77% of the allocation limit. However, the committed peak



Note:
The map is a geographical representation of the 2017 Public Community Water Purveyor Service Areas GIS data layer. Water purveyors are regulated by the NJDEP Bureau of Safe Drinking Water, under the Safe Drinking Water Act. The boundaries mapped are those of the actual water delivery or service area. Franchise areas are not depicted (areas with legal rights for future service once developed).

Source.: NJGIN Open Data (njogis-newjersey) Purveyor Service Areas ofNew Jersey.

Figure IV-1. Existing Water Service Area Map.

Existing Water Service Area

ENVIRONMENTAL RESOLUTIONS, INC.

EXISTING WATER SERVICE AREA

UTILITY SERVICE PLAN ELEMENT
FLORENCE TOWNSHIP, BURLINGTON COUNTY
NJ SOURCE: BURLINGTON COUNTY
WASTEWATER MANAGEMENT PLAN

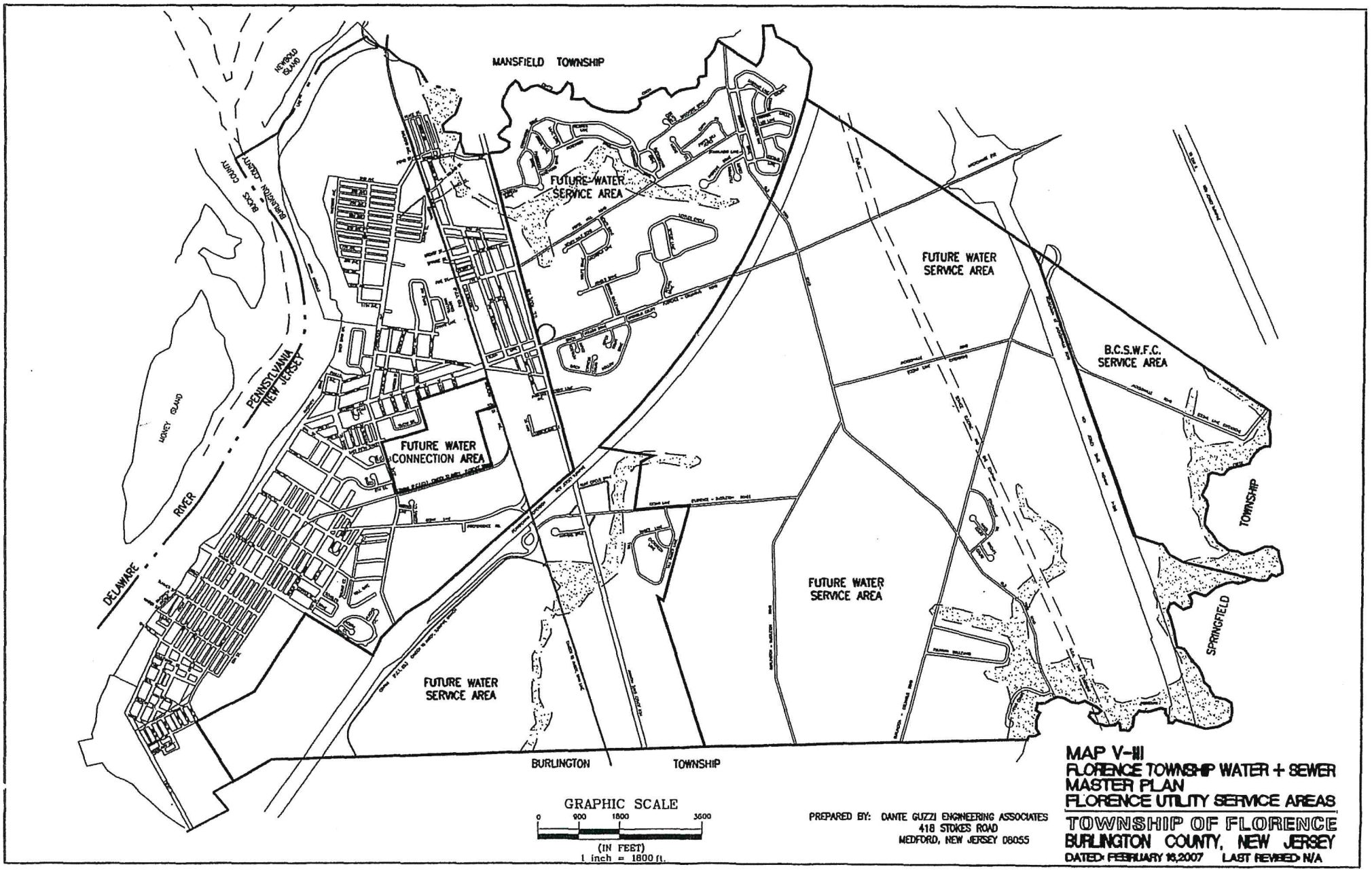


Figure IV-2. Future Water Service Area Map.

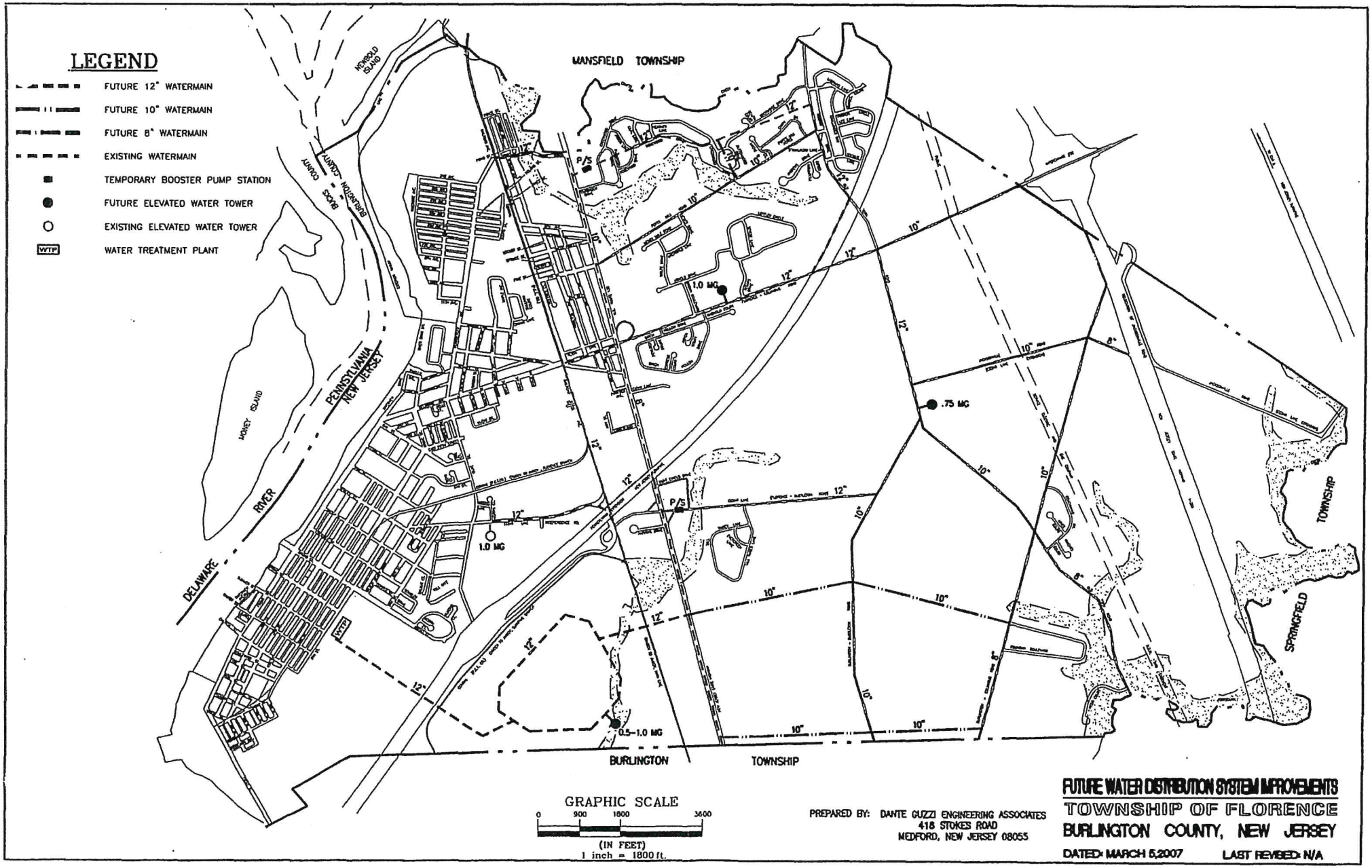


Figure IV-3. Future Water Distribution System Improvements.

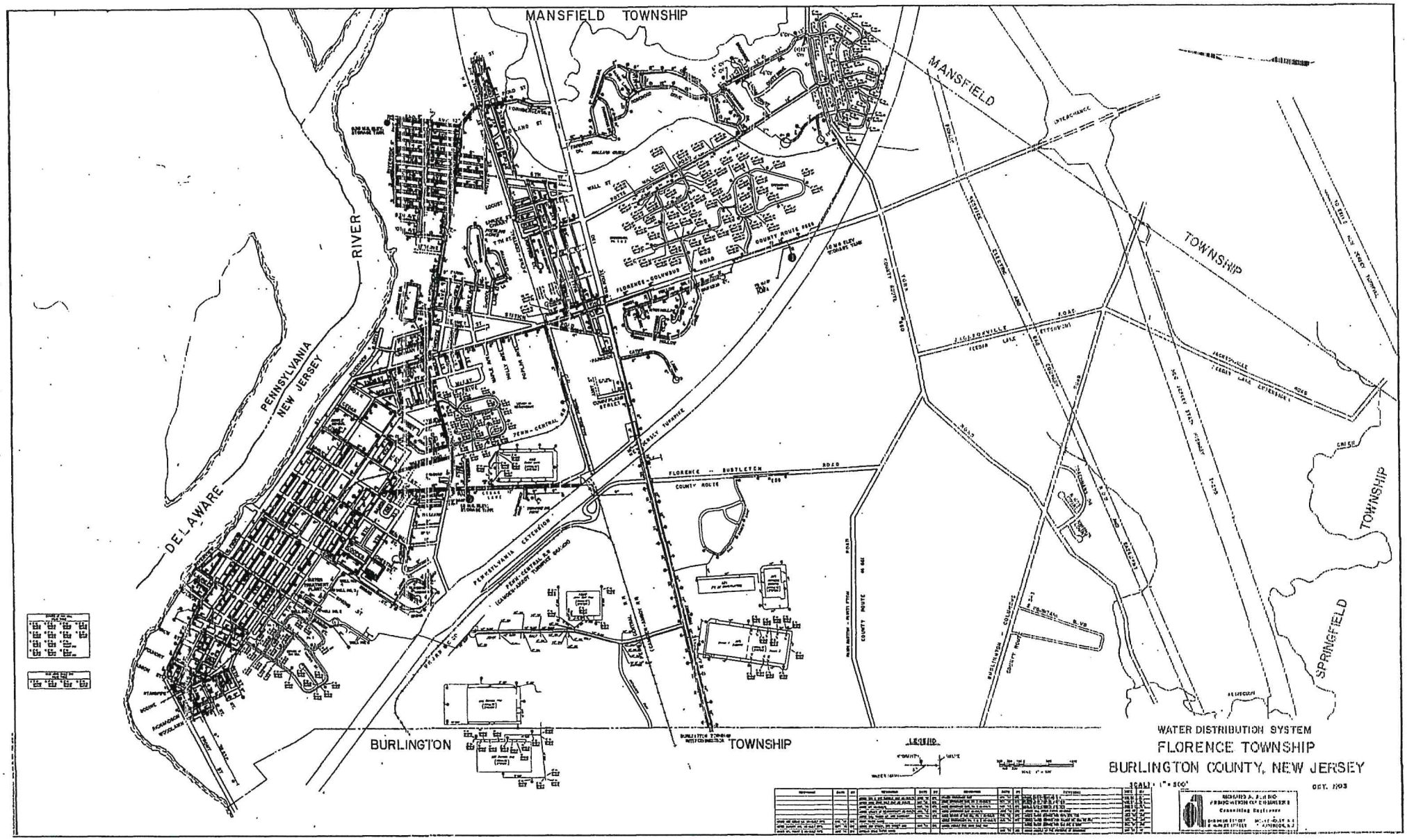


Figure IV-4. Water Distribution System Map, October 1993, Last Revised March 2018.

daily demand represents 90.5% of the limit. This suggests that while potable water demand remains within legal limits, continued development may necessitate an increase in the allocation limits and production capacity of the Township.

Table IV-1. Average Potable Water Demand by Period.

Demand Period	Current Peak	Date	Committed Peak	Allocation Limits
Daily	2.04 MGD	July 2019	2.39 MGD	2.64 MGD
Monthly	63.20 MGM	July 2019	68.58 MGM	79.30 MGM
Yearly	617.25 MGY	2018	659.47 MGY	716.80 MGY

Source: Thomas Koslowski, Alaimo Group, March 24, 2020.

The Township of Florence currently has diversion allocation rights from the DEP for a total of 79.3 million gallons per month (MGM). A peak monthly flow of approximately 68.6 MGM was reported in 2019, which constitutes 86.5% of total allowable water withdrawal. As a result, continued growth in the Township may require investment in additional potable water capacity.

3. Future Flow Projections

Future flow projections were prepared and provided by Alaimo Group Consulting Engineers. Projections of the average daily, monthly, and annual demand as well as the peak demand were prepared for the existing condition and as 5, 10, and 15-year projections. The projected flows are listed in ***Table IV-2. Potable Water Demand Projection*** below:

Table IV-2. Potable Water Demand Projections.

Year	Average Demand (MG)			Peak Demand (MGD)	
	Daily	Monthly	Annual	Daily	Monthly
2020	1.69	51.44	617.25	2.04	63.20
2025	1.83	55.59	667.06	2.74	84.98
2030	1.85	56.18	674.21	2.77	85.89
2035	1.87	56.79	681.48	2.80	86.82

Source: Thomas Koslowski, Alaimo Group, March 24, 2020.

4. Existing Facilities

a. Wells

The Township is currently served by six (6) wells which are all located within on thousand feet (1,000') of the Township's water treatment plant at Sixth Street and Summer Street. Two of these wells were drilled in 1931, two were drilled in 1953, one in 1994, and one in 2008. ***Table IV-3. Inventory of Municipal Wells*** lists the characteristics

and yields of these wells. All six (6) wells draw from the Potomac-Raritan-Magothy (PRM) Aquifer at depths of 120-150 feet.

Table IV-3. Inventory of Municipal Wells.

Well #	Block	Lot	Location	Year Drilled	Depth	Screen Diameter	Current Yield (GPM)
1	156.02	13	238 6th Street West at Summer Street (Water Plant)	1931	117'	18"	475
2	156.02	19	650 Summer Street (By Township Garage)	1933	119'	18"	500
3	156.02	17.01	Behind Municipal Building (Near Ball Field)	1949	134'	16"	513
4	156.02	17.01	Broad Street by Municipal Building	1949	138'	16"	528
5	155.49	54.04	End of Summer Street	1994	136'	16"	500
6	155.49	54.01	Behind Police Building Across from Broad Street Pump Station at Ninth Street	2008			

Source: David Lebak, Florence Township Water and Sewer Director, March 11, 2020 and May 22, 1995 Master Plan, Utility Service Plan Element.

b. Florence Water Treatment Plant

The water delivered from the Florence Township wells is of good quality. It is low in iron and manganese and requires little treatment. The treatment which was provided in the original Township treatment works consisted of aeration for carbon dioxide stripping and chlorination for disinfection. A partial upgrading of the existing distribution system was started in 1983 to relieve pressure deficiencies in existing service areas. The water plant was upgraded in 1988 by the addition of a lime treatment process designed to eliminate corrosive conditions; instrumentation was added to automate certain plant functions and a fifth well was constructed in 1994. However, persistent problems with rusty water throughout the town led to the addition of a lime treatment facility in 1988. The lime treatment process raises both water pH and mineral content to prevent oxidation of iron in the distribution system and provide a thin protective coating on the pipes. The Township is currently in the process of upgrading the water treatment plant to provide, among other things, caustic soda addition for pH control and conversion of gaseous chlorine to sodium hypochlorite.

The water treatment plant also houses the high-pressure pumps which are required to boost the treated water pressure prior to distribution. Each of the four pumps have a capacity of 600 GPM. Two of the pumps have auxiliary gasoline powered engines to run the pumps in the event of a power failure. The two (2) pumps with auxiliary gasoline powered engines to run the pumps in the event of a power failure. The two (2) pumps with auxiliary engines were installed in 1931. The other two (2) pumps were installed in 1948.

In 2018, the Township completed a Phase 1 upgrade at the water treatment plant that included two new aerators for pH control, a new clear well and building, four new high service pumps to supply the potable system, and electrical and control systems. The improvements solidified treatment and delivery capacities.

In 2020, the Township commenced work on Phase 2 which included a new building housing an operator's office, maintenance shop, chemical storage and chemical feed pumps, new electrical feed equipment, a new generator and new control systems for the water plant and water towers. This upgrade will provide service and treatment upgrades 15-20 years into the future.

c. Storage Tanks

The Township utilizes two elevated water storage tanks, each of which provide 1.0MG of storage. The original storage tank was constructed in 1969. An additional storage tank (Water Tower #2) was constructed in 2000 to supplement the storage capacity of the original tank and to provide redundancy and allow maintenance of the old storage tank. ***Table IV-4. Inventory of Water Storage Tanks*** below lists the characteristics and location of the storage tanks.

Table IV-4. Inventory of Water Storage Tanks.

Name	Location	Block	Lot	Year Built	Capacity
Cedar Lane Water Tower	265 Cedar Lane (Across from Morris Court), 40.111563, -74.799225	155.47	22	1969	1.0 MG
Florence- Columbus Road Water Tower	Florence-Columbus Road and Turnpike Service Driveway, 40.096830, -74.774659	164.02	5.03	2000	1.0 MG

Source: Thomas Koslowski, Alaimo Group, March 24, 2020.

D. Wastewater Management Plan

1. Introduction

The February 24, 2003 Master Plan Reexamination Report indicated the Utility Plan Element of the Master Plan was proposed to be amended by the Wastewater Plan (WMP) Amendment of February 2003. David Lebak, Florence Township Water and Sewer Director indicated that the latest Wastewater Management Plan prepared by the Township was prepared on March 11, 2003 and was revised on December 31, 2003. The Wastewater Management Plan was revised again on March 3, 2004 to include the new Florence Township High School on Florence-Bustleton Road which was not in the sewer service area. The WMP Amendments proposed an expansion of the sewer service area to include the parcels in the HC-Highway Commercial Zoning District on the eastern side of Route 130. While the HC properties had public sewer available, only several hundred feet of the Route 130 frontage of the properties were in the sewer service area and not the entire properties which were over 2,000 feet in depth.

A Public Notice issued by NJDEP Division of Watershed Management indicated that on February 5, 2007 an Amendment to the Tri-County Water Quality Management Plan and the Florence Township Wastewater Management was adopted by the NJDEP. The amendment updated the Florence Wastewater Management Plan to add 69.59 acres of additional sewer service area (SSA) to the SSA of the Florence Township Sewer Treatment Plant (STP) SSA. The area is in the western portion of the Township along the Route 130 corridor and is adjacent to Florence Township's border with Burlington Township. The lots and blocks included in the SSA are:

Block 160.01, Lot 1.01 (23.26 acres additional SSA)
Block 160.01, Lot 7 (0.16 acres additional SSA)
Block 160.01, Lot 8 (4.37 acres additional SSA)
Block 160.01, Lot 9 (7.79 acres additional SSA)
Block 160.01, Lot 10.01 (3.66 acres additional SSA)
Block 160.01, Lot 2.01 (29.33 acres additional SSA)
Block 160.01, Lot 10.02 (1.02 acres additional SSA)

The Public Notice indicates the expansion will generate a maximum of 107,000 gallons per day (gpd) based on the potential to support 1.07 million square feet of commercial development calculated at 0.1 gpd per square foot of commercial space. This addition to the SSA would not require an expansion to the Florence Township Sewer Treatment Plant.

In 2008, the New Jersey Department of Environmental Protection (NJDEP) adopted major amendments to the Water Quality Management Planning rules (NJAC 7:15 et seq.) The amended rules stated that each county board of chosen freeholders were responsible for the preparation of wastewater management plans for all of their municipalities. Prior to this, the agency responsible for constructing and operating wastewater treatment plans were responsible for preparation of the Wastewater Management Plan (WMP). While the deadline for preparation of these plans was April 7, 2009, by April 2011, few, if any counties had submitted a county-wide plan.

Further legislation provided for subsequent deadlines and in November 2016, the NJDEP revised and readopted water quality management plan rules (WQMP) that required the development of a wastewater management plan. The Burlington County Wastewater Management Plan was developed with the readopted rules. Upon adoption, the plan will be valid for a period of eleven years.

The most recent Wastewater Management Plan (WMP) for Florence Township and other municipalities in Burlington County is the May 1, 2017 Draft Burlington County Wastewater Management Plan prepared by Burlington County Department of Resource Conservation. The Burlington County Board of Chosen Freeholders designated the Department of Resource Conservation as the agency to prepare and maintain the WMP. The contact person for the plan is Mary Pat Robbie who on May 20, 2020 indicated that the Draft is the most current document except for some minor changes and the addition of a Septic Management Plan component. Ms. Robbie indicated that the

County is still waiting for NJDEP approval of the plan and that no deadline for approval has been conveyed. The WQMP rules provide that any WMP previously approved by NJDEP will remain in force until superseded by a subsequent WMP. For at least a portion of Florence Township, the approved WMP does not expire until November 20, 2024.

The Burlington County Wastewater Management Plan contains a number of maps that are provided in this Florence Township 2020 Master Plan for information and reference purposes. In order to show the Township features clearly, the maps which showed the entire County have been enlarged to show just Florence Township with the exception of Map 3M-15 which only shows Florence Township on the original WMP map. The maps include the following:

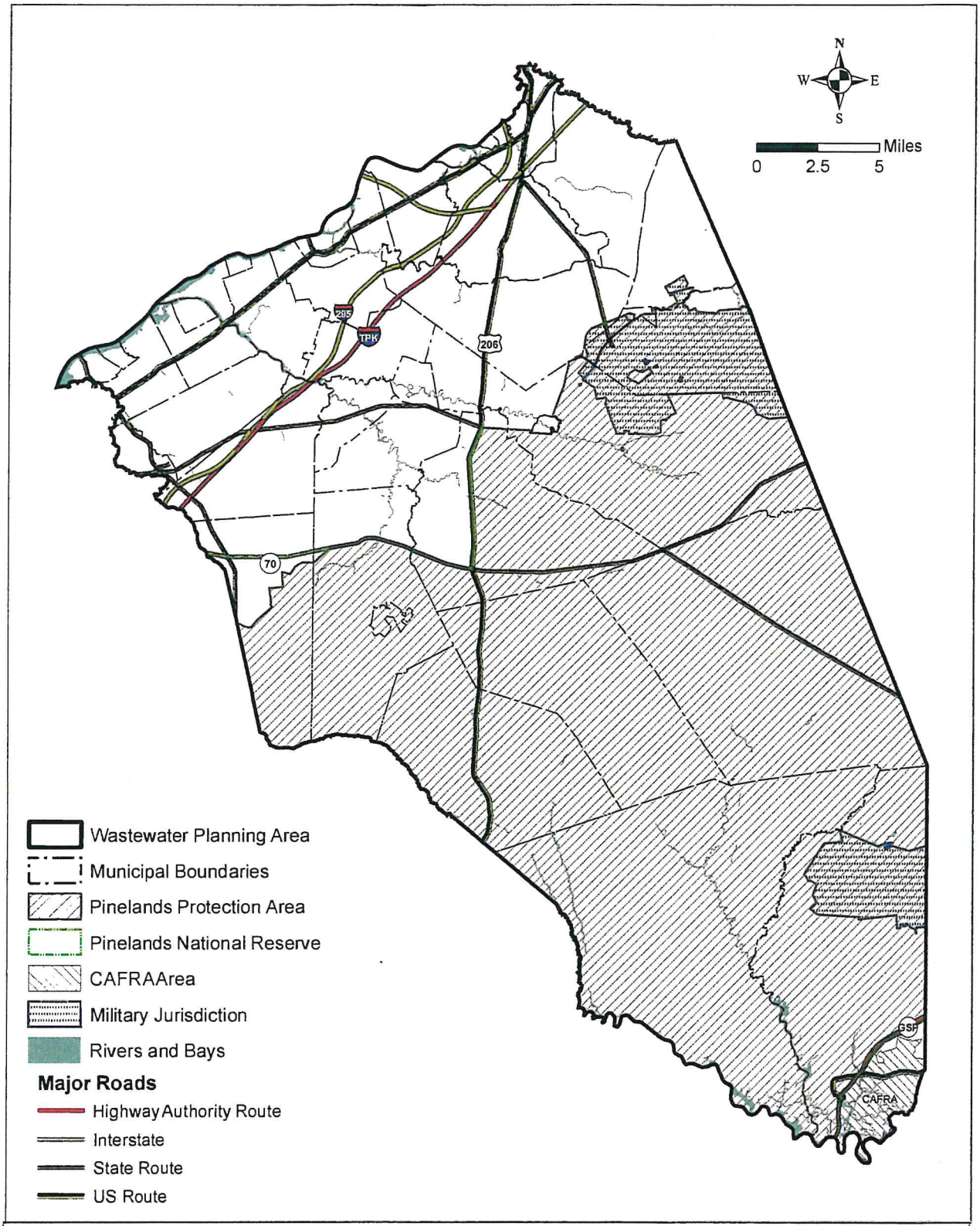
Figure IV-5. Burlington County Wastewater Management Plan Enlarged Florence Township Maps.

Figure IV-5.	***Map 1:***	***Wastewater Management Planning Area***
Figure IV-6.	***Map 2:***	***Environmentally Sensitive Features***
Figure IV-7.	***Map 3:***	***Wastewater Service Areas***
Figure IV-8.	***Map 3M-15:***	***Florence Township Wastewater Service Areas***
Figure IV-9.	***Map 4:***	***Adopted and Proposed Sewer Service Areas***
Figure IV-10.	***Map 5:***	***Preserved Lands & Other Constraints***
Figure IV-11.	***Map 6:***	***Sewer Service in Environmentally Sensitive Areas***
Figure IV-12.	***Map 7:***	***Major Interceptors and Pump Stations***

The WQMP rules permitted approved site-specific water quality management plan and wastewater management plan amendments from the Department to be included in the WMP. Where a development has secured approval under the Municipal Land Use Law and possesses a valid wastewater approval, the site may be included in the sewer service area if consistent with that valid wastewater approval. Site included under these conditions are shown on Map 6: Sewer Service in Environmentally Sensitive Areas of the County WMP. In Florence Township there are two sites: #50-NFI and #51-Florence Township. Also, where a project has an approved site specific WMP amendment from NJDEP, the project may be included in the wastewater management plan consistent with that approved site specific amendment for a period of six years from the date the amendment was adopted, unless the site is connected to public sanitary sewer. In those cases, the site remains in the sewer service area. In Florence, there were two projects in this category shown in Table 2. Valid Approvals Used for Mapping in the Burlington County WMP. The first project is NFI Real Estate listed as a WQMP Revision Approved on 2/25/2010, on Block 160.01, Lot 6.01. The second project is listed as Florence Township, TWA Approval on 2/6/2006, Block 165.01, Lot 2.01, Approval Number 05-0739.

2. Summary of Significant Actions

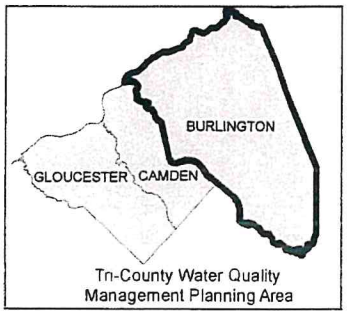
The Burlington County WMP provides a Summary of Significant Actions and map changes that necessitated a modification to certain sewer service areas. There were no Significant Actions listed that affected Florence Township.



Burlington County Wastewater Management Plan

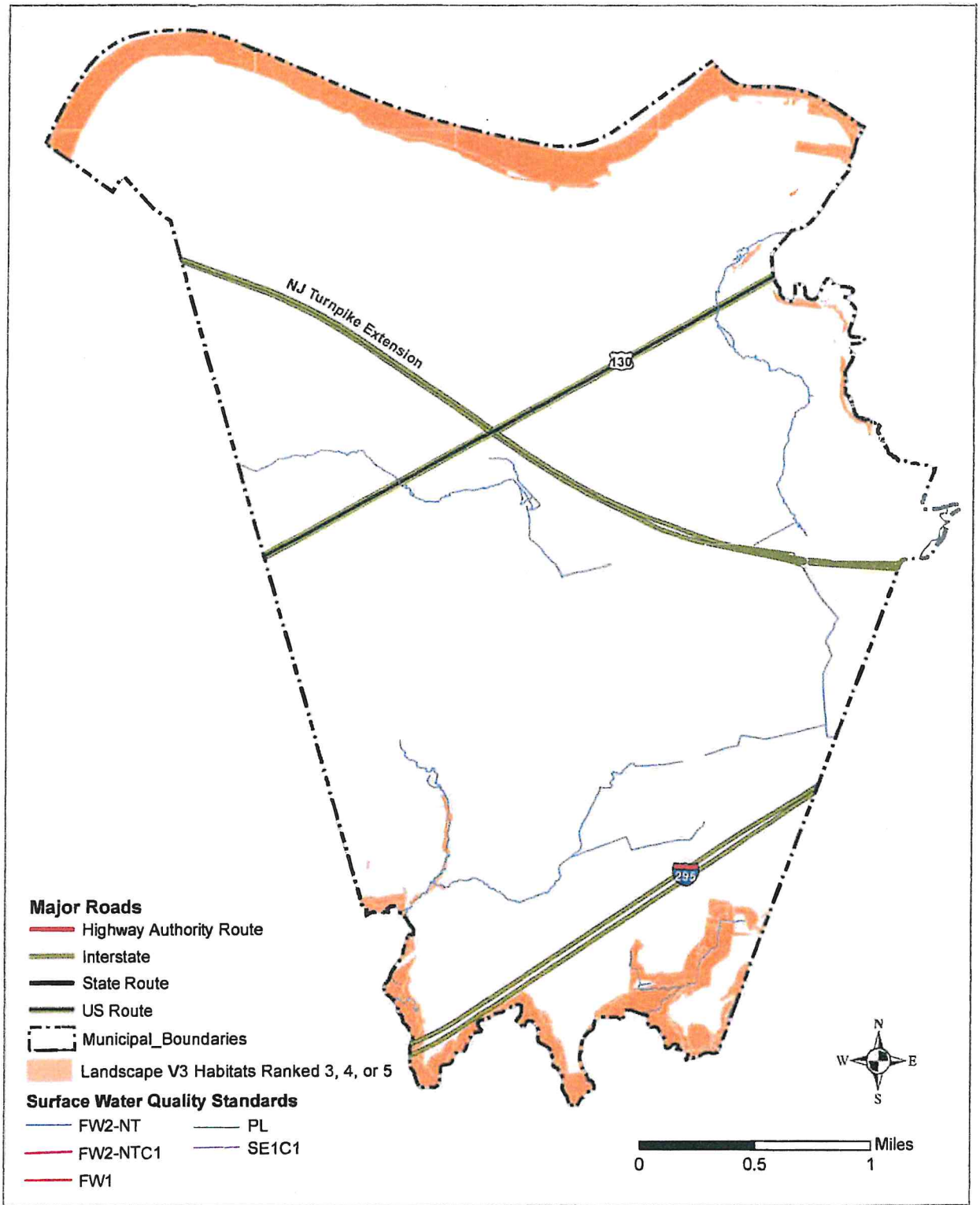
Amending the Tri-County Water Quality Management Plan

Map 1: Wastewater Management Planning Area



Prepared by: Burlington County
Department of Resource Conservation
16 June 2020

Figure IV-5.



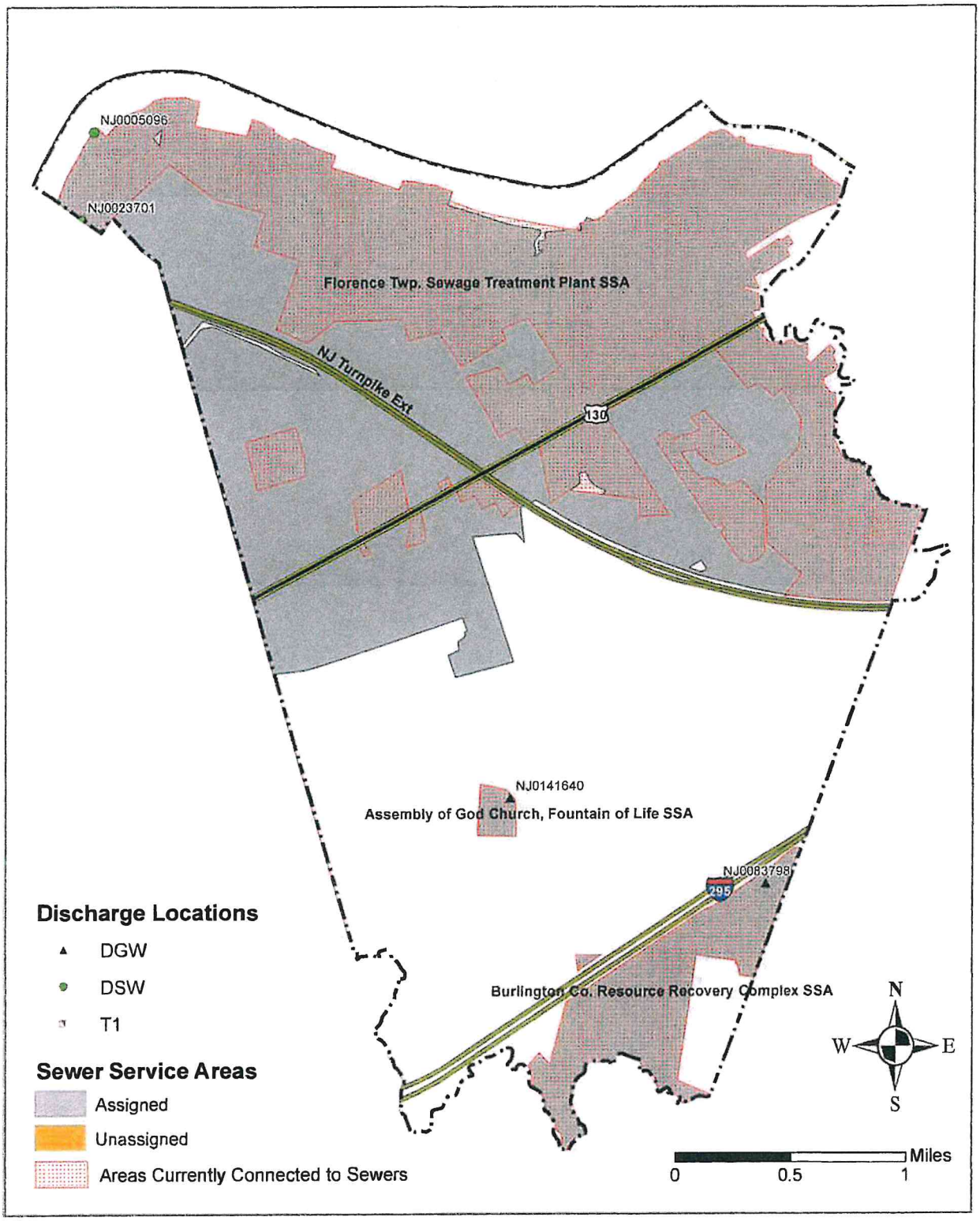
Burlington County Wastewater Management Plan - Florence Twp.

Amending the Tri-County Water Quality Management Plan

Map 2: Environmentally Sensitive Features

Prepared by: Burlington County Department of Resource Conservation
16 June 2020

Figure IV-6.



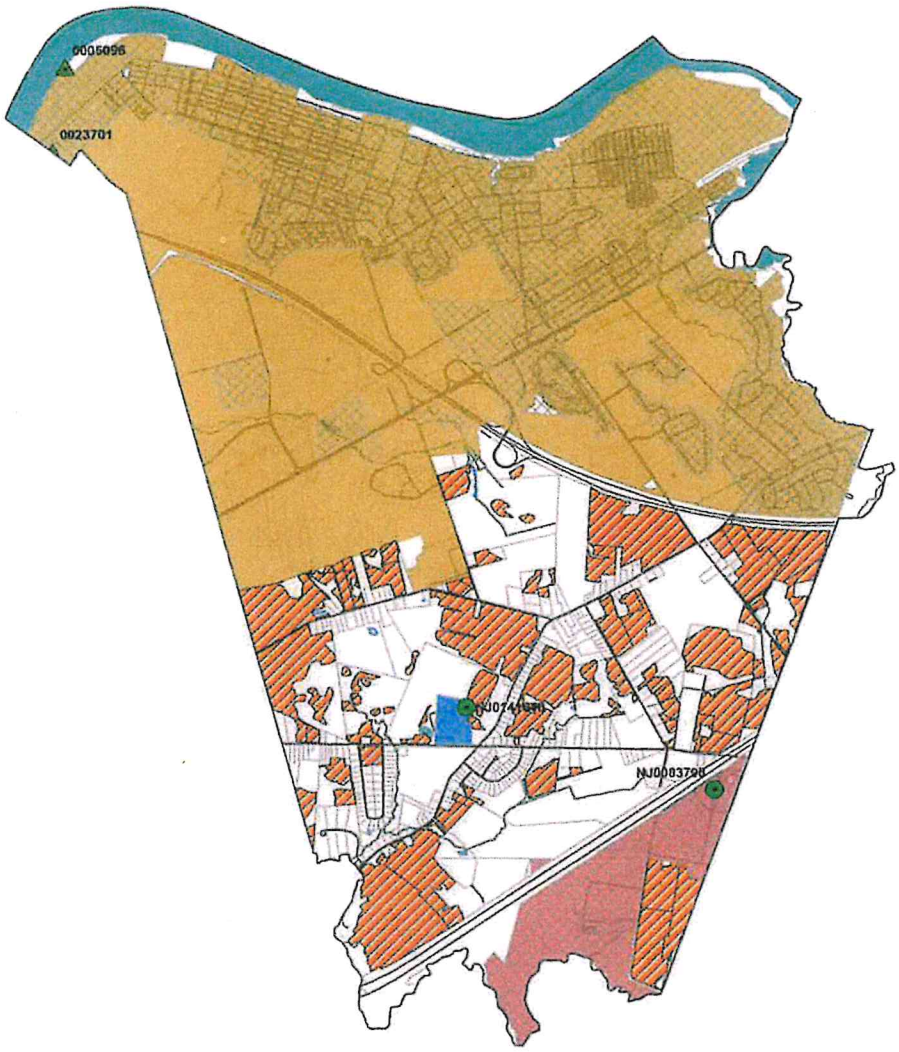
Burlington County Wastewater Management Plan - Florence Twp.

Amending the Tri-County Water Quality Management Plan

Map 3: Wastewater Service Areas

Prepared by: Burlington County
Department of Resource Conservation
16 June 2020

Figure IV-7.



Legend

- Pinelands Protection Area Boundary
- Municipal Boundary
- Parcel Boundary
- Streams & Waterbodies
- Roads
- T1 Permitted Discharges
- Discharge to Ground Water
- Discharge to Surface Water

Septic Service Areas

- Developable Septic Service Areas

Sewer Service Areas

- Florence Township Sewage Treatment Plant
- Assembly of God Church, Fountain of Life
- Burlington County Resource Recovery Complex
- Areas with Existing Connection to Sewer Service

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Burlington County Wastewater Management Plan

Amending the Tri-County Water Quality Management Plan

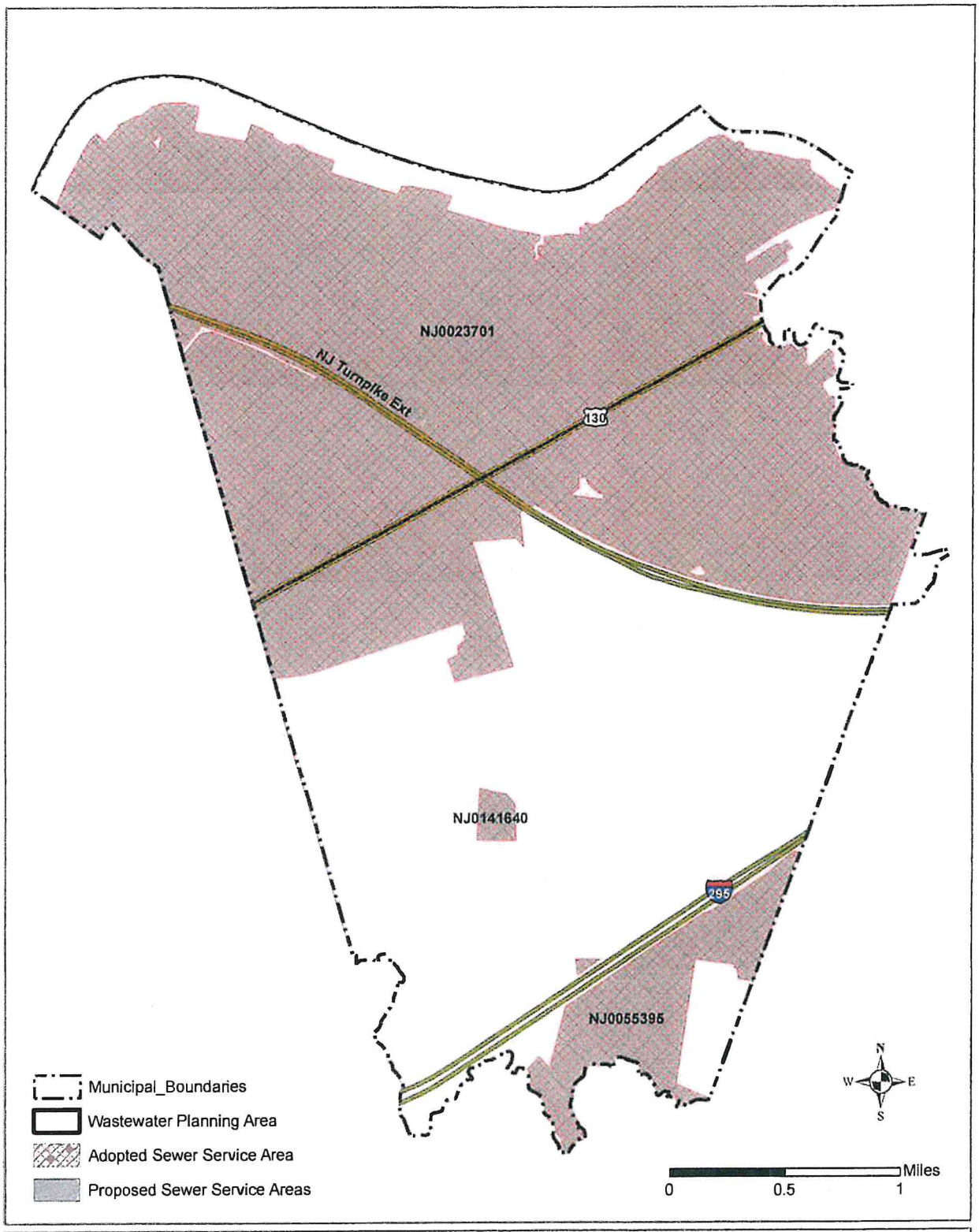
Map 3M- 15: FlorenceTownship Wastewater Service Areas

Prepared by: Burlington County Department of Resource Conservation
Mailing Address: PO Box 6000
Mount Holly, NJ 08060
Physical Address: 624 Pemberton Browns Mills Road
Pemberton, NJ 08068

Figure IV-8.

Date: 4/24/2017

Document Path: Z:\Wastewater\WWMP\Draft Plan\Maps\GIS files\Municipal Map3\Florence.mxd



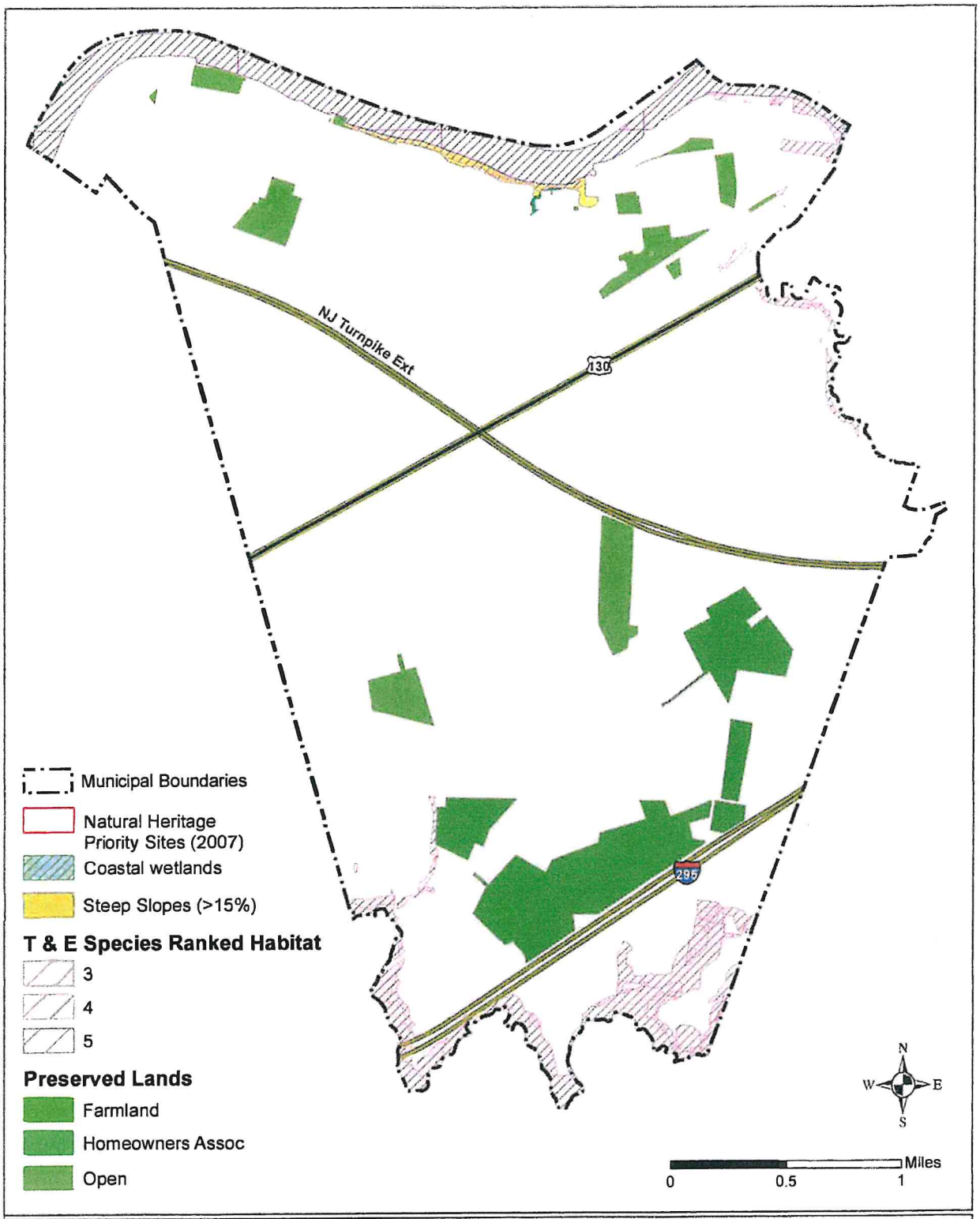
Burlington County Wastewater Management Plan - Florence Twp.

Amending the Tri-County Water Quality Management Plan

Map 4: Adopted and Proposed Sewer Service Areas

Prepared by: Burlington County
Department of Resource Conservation
16 June 2020

Figure IV-9.



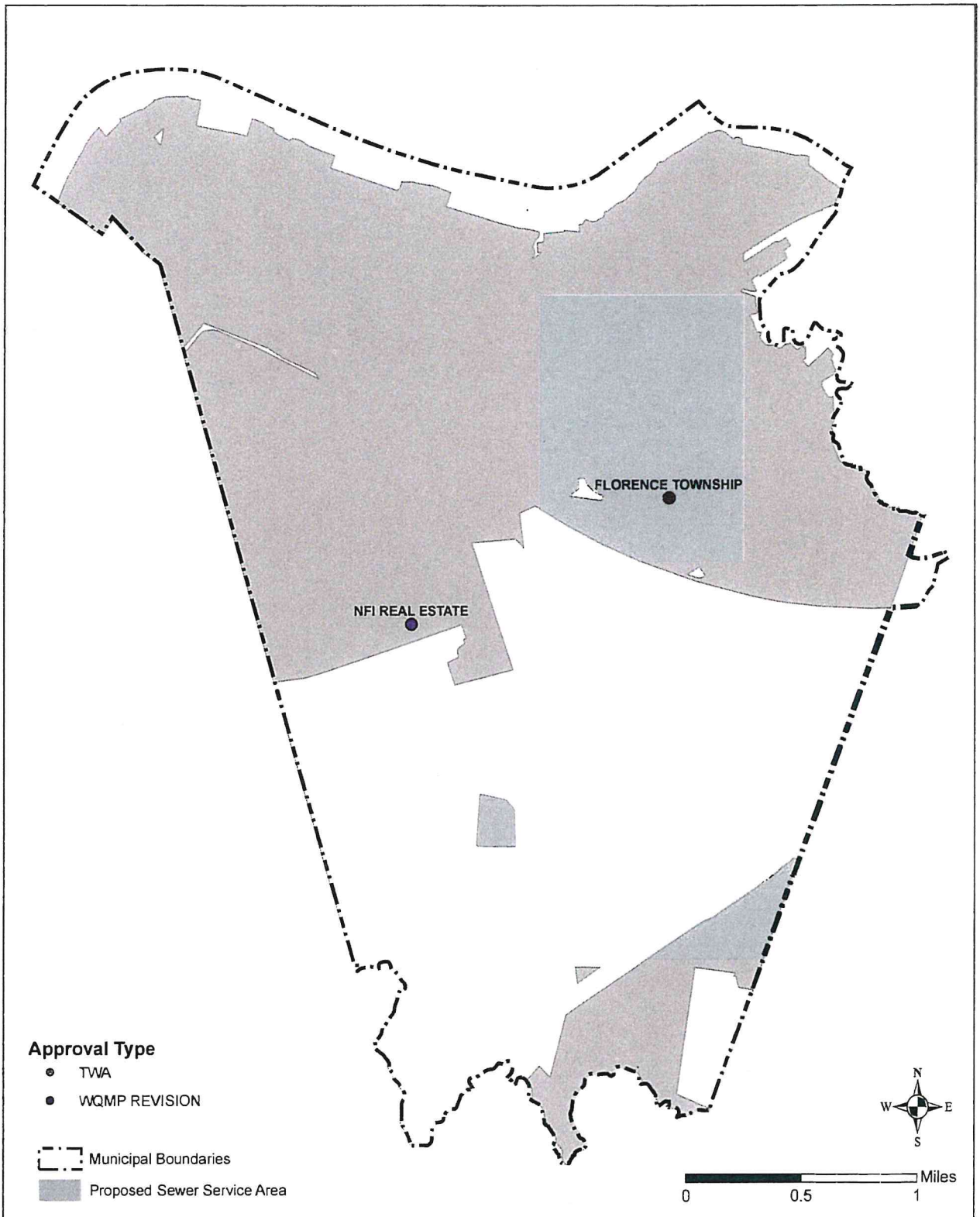
Burlington County Wastewater Management Plan - Florence Twp.

Amending the Tri-County Water Quality Management Plan

Map 5: Preserved Lands & Other Constraints

Prepared by: Burlington County
Department of Resource Conservation
16 June 2020

Figure IV-10.



Burlington County Wastewater Management Plan - Florence Twp.

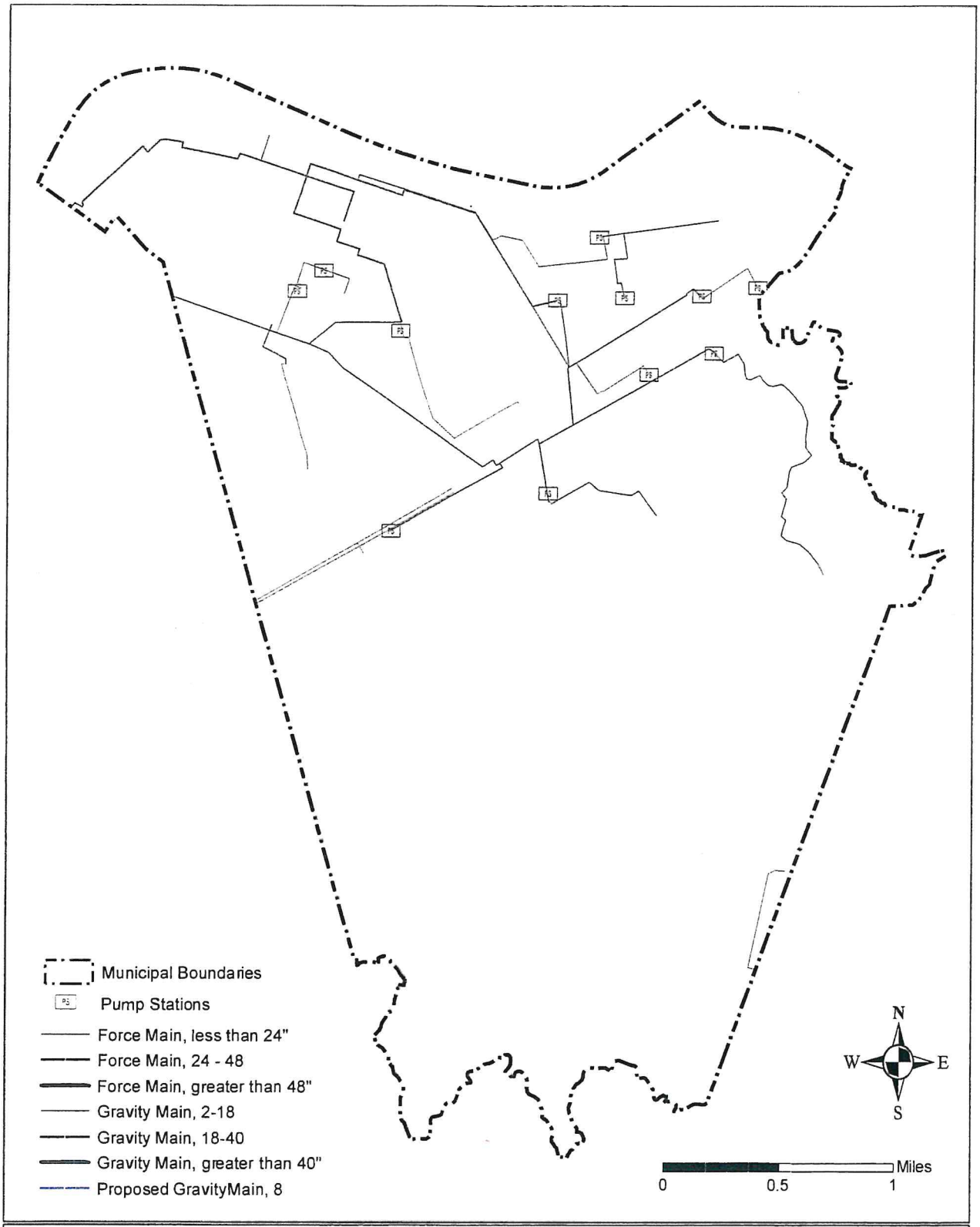
Amending the Tri-County Water Quality Management Plan

Map 6: Sewer Service in Environmentally Sensitive Areas

Prepared by: Burlington County
Department of Resource Conservation
16 June 2020

Sewer Service in Environmentally Sensitive Areas
Where a development has secured approval under the Municipal Land Use Law and possesses a valid wastewater approval, the site may be included in the sewer service area if consistent with that valid wastewater approval. This information was gathered in consultation with municipalities and property owners. Some of the sites included on this map were excluded due to a lack of valid approvals, and a review by DEP indicated exclusion was necessary.

Figure IV-11.

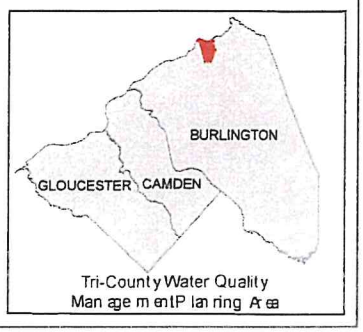


Burlington County Wastewater Management Plan - Florence Twp.

Amending the Tri-County Water Quality Management Plan

Map 7: Major Interceptors & Pump Stations

Note: Map depicts approximate locations of collection system where mapping information was available. Not all collection infrastructure is shown.
This map is for planning purposes only and no claim is made regarding precision. Any reliance on this map for any other purpose is solely the responsibility of the user.



Prepared by: Burlington County
Department of Resource Conservation
16 June 2020

Figure IV-12.

3. Proposed Sewer Service Areas

The existing Sewer Service Area for Florence Township WMP is shown on ***Figures IV-7*** and ***IV-8***. The figures also show the Township Treatment Plant Discharge to Surface Water location and two locations of Discharges to Ground Water. Developable Septic Service Areas and developed and developable Sewer Service Areas are also shown on ***Figure IV-8***. The Adopted and Proposed Sewer Service Areas are shown on ***Figure US-9*** and coincide with the service areas shown on ***Figures IV-7*** and ***IV-8***. ***Figure IV-10*** shows Preserved Land and Other Constraints and ***Figure IV-12*** shows Major Interceptors and Pump Stations in the Township.

4. Existing On-Site, Non-Industrial Wastewater Facilities

The Burlington WMP identifies existing on-site, non-industrial wastewater treatment facilities where regional sewerage is not available. These facilities discharge to surface water or discharge more than 2,000 gallons per day to ground water of domestic wastewater and are regulated under a NJPDES permit. In Florence Township there is one such facility: Assembly of God, Fountain of Life, 2030 Columbus Road, Block 170, Lot 6.01 (Longitude 74° 47' 24" W, Latitude 40° 4' 57") NNJPDES Permit No. NJ0141640. The site is an assembly hall (church) with appurtenant uses including a dining hall, classrooms, and an associated single family dwelling. The discharge to groundwater has a maximum permitted flow of 0.0132 MGD and discharges to the Merchantville geologic formation. Current (Year 2015 and Build-out) residential flow is 0.00035 MGD and commercial flow (assembly hall, banquet hall, school) is 0.01285 MGD. Total Current (Year 2015 and Build-out) flow is 0.0132 MGD.

5. Existing Industrial Treatment Works for Process Wastes and Sanitary Sewage

The WMP provides tables of information for Industrial Wastewater Treatment Plants with either a Discharge to Ground Water or Discharge to Surface Water Permit. Burlington County Resource Recovery Complex is identified as the only Industrial Treatment Facility in the Township. In Florence Township, one facility is identified: Burlington County Resource Recovery Complex, Recovery Road, Block 172.05, Lots 16.01, 16.02, 17.01, 17.02, 17.03; Block 173, Lots 3.01, 4, 5, 6, 8.01, 10; Block 174, Lots 2, 3.01, 3.02, 3.03, 3.05, 3.06, 4.01, 4.02, 7; Block 180, Lot 8.02 in Florence Township and various other Blocks and Lots in Mansfield Township, (Longitude 74° 46' 7" W, Latitude 40° 04' 10" N) NJPDES Permit No. NJ0055395. This treatment plant is intended to process leachate from the on-site landfill. The plant is listed as not currently operating and leachate is hauled offsite to other treatment plants. The plant has a permitted flow of 0.07 MGD and would discharge industrial flow to the Assiscunk Creek if it were in operation.

6. Septic Service Areas and Other Small Treatment Works Not Discharging to Surface Waters

Remaining areas of the County, not otherwise identified as sewer service areas for treatment facilities requiring a NJPDES permit or areas that are eligible for sewer service, are included within a septic service area for septic systems and other small treatment

works that treat 2,000 gallons per day or less of wastewater and discharge to ground water. These areas are subject to a septic management program that will ensure these facilities are functioning properly.

7. Domestic Treatment Facilities Serving Multiple Municipalities

The Burlington County WMP identifies Domestic Treatment Facilities that serve multiple Municipalities. The Florence Sewage Treatment Plant (STP) is listed as such a plant. The STP is listed as serving a Current (Year 2010) Florence Township Population of 7,762 and a 20-year (2035) Future Population of 9,488. Current Florence Township residential flow is 1.291, commercial flow is 0.0519, and industrial flow is 0.028 MGD. 20-year (Year 2035) residential flow is 1.370 MGD, commercial flow is 0.434 MGD and industrial flow is 0.32 MGD. Infiltration/Inflow is 1.154 MGD Current and 20-year (Year 2035). Burlington Township is listed a 0 current and 20-Year Future (2035) residential and commercial Flow and 0.0036 MGD Current and 20-year (2035) flow. Flows are based on the highest 12-month average for the period 2013-2016. I & I is based on the difference between the average flow for the period and the average low flow for the same period.

8. Future County Wastewater Demand

The County WMP calculated the future wastewater demand for each assigned sewer service area. For Florence Township and other County communities, the process assessed whether there is sufficient wastewater treatment capacity to meet the needs of the County based on projections of municipal wastewater needs. The plan used a build-out methodology to estimate the existing wastewater flow and a projected flow for 2035.

For each assigned sewer service area, the County identified the existing wastewater flow using the highest consecutive 12 months rolling average over the most recent five-year period preceding development of the WMP, as reported in the Discharge Monitoring Reports required for each facility.

The 20-year wastewater flow projection was calculated for non-urbanized municipalities using a maximum build-out based on zoning and developable land in sewer service areas. Estimated future flows for Urbanized municipalities were calculated based on population and employment growth projections. For this analysis, the County considered municipalities where 90 percent or more of land area in the municipality is listed as "Urban Lands" on the Burlington County Land Use/Land Cover GIS database. Florence Township is considered a non-urbanized municipality so Build-Out was based on undeveloped and underdeveloped acreage in the sewer service area minus preserved open space and farmlands, waters, wetlands and common areas of residential areas that were set aside for density. ***Table IV-6. Build-Out Results By Zoning District*** and ***Table IV-7. Public Sewer Service Area*** summarizes the results of these analyses.

Table IV-6. Build Out Results By Zoning District.

Zone Designation	Zone Description	Municipal Area (Acres)	Developable Area (Acres)	Acres per Dwelling Unit	# of Units Residential SSA	# of Units Residential ISSDS	F.A.R.	# of Units Non-Residential - SSA (Square Feet)	# of Units Residential ISSDS (Square Feet)
AA	Active Adult Residential	36.10	0.00	0.25	0.00	0.00	N/A	0.00	0.00
AGR	Agriculture	2,329.50	648.90	3.00	0.00	194.00	N/A	0.00	0.00
C	Cemetery	22.90	5.50		0.00	0.00	N/A	0.00	0.00
E	Emergency Services	0.60	0.00		0.00	0.00	N/A	0.00	0.00
F	Fire House	0.80	0.00		0.00	0.00	N/A	0.00	0.00
GM	General Manufacturing	1,015.50	153.00	N/A	0.00	0.00	0.45	1,578,669.00	1,331,315.00
HC	Highway Commercial	482.40	127.40	N/A	0.00	0.00	0.35	3,029,983.00	0.00
L	Library	1.10	0.00		0.00	0.00	N/A	0.00	0.00
M	Municipal	2.50	0.00		0.00	0.00	N/A	0.00	0.00
NC	Neighborhood Commercial	69.60	2.20	0.25	0.00	0.00	0.30	23,984.00	0.00
OP	Office Park	82.30	20.70	N/A	0.00	0.00	0.20	736,769.00	0.00
P	Park	175.50	1.10	N/A	0.00	0.00	N/A	0.00	0.00
PWG	Public Works Garage	1.7	0.0		0	0	N/A	0.00	0.00
Q/S	Quasi Public Facility	8.0	0.0		0	0	N/A	0.00	0.00
R	Low Density Residential	615.7	65.3	0.5	113	0	N/A	0.00	0.00
RA	Low Density Residential - RA	692.1	41.0	0.25	150	0	N/A	0.00	0.00
RB	Medium to High Density Residential	111.2	0.0	0.17	0	0	N/A	0.00	0.00
RC	High Density	114.8	0.0	0.08	0	0	N/A	0.00	0.00
RD	High Density-Affordable	2.9	0.0	0.05	0	0	N/A	0.00	0.00
RD-1	High Density - Age Restricted	1.0	0.0	0.02	0	0	N/A	0.00	0.00
S	School	80.1	0.0	N/A	0	0	N/A	0.00	0.00
SM	Special Manufacturing	453.4	207.9	N/A	0	0	0.35	1,343,886.00	1,783,821.00
STP	Sewage Treatment	1.2	0.0	N/A	0	0	N/A	0.00	0.00
WTP	Water Treatment	1.5	0.0	N/A	0	0	N/A	0.00	0.00
Totals		**6,302.40**	**1,273.00**		**263**	**194**		**6,713,291.00**	**3,115,136.00**

Note: The County total for the Municipal Area was shown as 6,560 Ac., however, the total of the columns equals 6,320.4 Ac.

Table IV-7. Public Sewer Service Area.

Zoning District	DU	SF	Future Flow	Developable Acres
AGR	0.00	0.00	0.00	2.60
C	0.00	0.00	0.00	5.50
GM	0.00	4,445,274.00	444,527.00	85.00
HC	0.00	10,372,000.00	1,037,200.00	127.30
NC	7.00	0.00	2,100.00	2.20
OP	0.00	736,769.00	73,677.00	20.70
P	0.00	0.00	0.00	1.10
R	113.00	0.00	33,900.00	65.30
RA	150.00	0.00	45,000.00	41.00
SM	0.00	2,374,690.00	237,469.00	90.90
Totals	**270.00**	**17,928,733.00**	**1,873,873.00**	**441.60**

The WMP provides the Capacity Summary for Major Domestic Discharges for the County. The WMP indicates that the average existing flow to the Florence Township STP was 1.531 MGD or 61% of capacity of 2.5 MGD. Projected additional flow was 0.750 MGD and total future planning flows are 2.281 MGD or 91% of the total permitted flow. The analysis indicates a projected surplus flow of 0.219 MGD.

The Township is currently working on design plans for the next Wastewater Treatment Plant Upgrade. The goal is to increase the plant's design capacity to 3.0 MGD or 3.5 MGD if that is possible based on the new equipment and treatment processes. The Township anticipates bidding the project in 2022 and completing it in 2023 if funding for the new design is available.

9. Septic Management Plan Component

The New Jersey Water Quality Management (WQM) Planning Rules (NJAC 7:15-1 et seq., require that all designated Water Quality Management Planning agencies demonstrate that areas to be served by individual subsurface disposal systems (ISSDSs) are subject to a mandatory maintenance program, such as an ordinance, which ensures that all individual subsurface disposal systems are inspected at a frequency to adequately determine if they are functioning properly (NJAC 7:15-4.5(c)1vi.

In Burlington County, the Board of Chosen Freeholders is the designated Water Quality Management Planning Agency and the Department of Resource Conservation is charged with preparing a Wastewater Management Plan including a Septic Maintenance component. The County's Septic Maintenance Plan was last revised on March 16, 2017.

The Burlington County Health Department (BCHD) is responsible for approving construction, installation, repair, and alteration of individual subsurface sewage disposal systems. They are also responsible to respond to complaints regarding sewage overflows and illegal installations and repairs.

BCHD began recordkeeping of installations and repairs in 1977 and in 1990, the records have been maintained in a digital database. For Florence Township, the County estimates there are approximately 276 ISSDSs.

The WMP also analyzed the adequacy of the septic carry capacity (nitrate dilution) in septic areas throughout the County (***Table IV-8. Septic System Densities and Allocations for Florence Township*** and ***Table IV-9. Build Out Results by HUC 11***. For Florence Township, the following analysis was stated:

> In Florence Township, HUC #02040201090 is zoned for a potential of 51 dwelling units in the AGR zoning district and 1,596,580 square feet (or 399 equivalent dwelling units) of commercial or industrial in the SM district. This watershed projected a total of 450 equivalent dwelling units exceeds the capacity of 77 units. In the Township's portion of HUC #02040201100, it is zoned for 143 dwelling units in the AGR, plus 187,241 square feet in the GM zoning district. The total of 522 equivalent dwelling units from all development exceeds the calculated carrying capacity of 144 units.

Table IV-8. Septic System Densities and Allocations for Florence Township.

HUC 11 - CODE	Undeveloped Acres	Total Acres of HUC 11 in Municipality	Percent of HUC 11 Undeveloped in Municipality	Zoned Units (Includes Equivalent d.u.)	Allowed Units (Based on 2016 Analysis)	Septic Density (Acres/ du)
2040201090	519.86	4524.41	11.49%	450	77	6.7
2040201100	894.04	1997.07	44.77%	522	144	6.2

Table IV-9. Build Out Results by HUC 11.

HUC 11	Residential Area (Acres)	# of Units Residential	Non-Residential Area (Acres)	# of Units Non-Residential	Total Acres	Total New Units
2040201090	176.35	51	104.72	399	281.1	450
2040201100	470.03	143	80.2	379	550.23	522

E. Wastewater Treatment, Storage, Pumps and Management

1. Florence Township Treatment Facilities

The Florence Township (NJPDES NJ0023701) Sewage Treatment Plant, Site ID 00010849, located at 1500 Front Street, Block 156.01, Lots 2.01, 3 and 3.01, has a

permitted capacity of 2.5 MGD and provides secondary treatment using an extended aeration process. The Wastewater Treatment Plant was upgraded in 2000, increasing the treatment capacity of the plant from 1.5 MGD to 2.5 MGD.

In 2020, the Township started design work to upgrade the WWTP. The upgrade will include new headworks for the plant. This is the front end of the plant where the wastewater enters. The upgraded equipment will include:

- Bar screen to remove large rags and debris.
- Pumps to move the wastewater into the treatment plant.
- Grit removal to rid the flow of sand, dirt and abrasives.
- Consideration for a third secondary clarifier to assist with separating solids downstream in the process.

The ultimate goal of the WWTP upgrade will be to keep the treatment current and efficient as well as to increase plant capacity for future flows. This upgrade will be designed to carry the plant 20 years+ into the future.

In addition to improvements listed above, a Sludge Screw Press will be added to the Wastewater Treatment Plant. The Sludge Press will give the Township the ability to process more sludge in less time. Since the press is fully automated, it frees up manpower and will ultimately, combined with the 2020 upgrades, provide the ability to increase plant capacity due to the greater ability to balance the process. The upgrade will carry the Township 10-15 years into the future.

The Sewage Treatment Plan outfall discharges directly to the Delaware River, across Front Street from the plant. No change is proposed to the discharge point.

An estimate of the exiting wastewater flow was obtained from the 2019 NJDEP Discharge Monitoring Report (DMR) documenting sanitary discharges from the Florence Wastewater Treatment Plant. ***Table IV-10. Monthly and Annual Average Wastewater Flow for Florence Township Wastewater Treatment Plant*** below lists the monthly average flows in addition to the annual average for 2019. As can be seen, the average annual flow was calculated to be 1.224 MGD, well below the facility's approved capacity of 2.5 MGD.

Table IV-10. Monthly and Annual Average Wastewater Flow for Florence Township Wastewater Treatment Plant.

Collection Period	Monthly Average Flow (MGD)
January	1.726
February	1.434
March	1.359
April	1.158
May	1.194
June	1.502
July	1.084
August	1.050
September	1.028
October	0.972
November	1.070
December	1.114
Annual Average:	**1.224**

2. Private Treatment Facility - Garelick Farms Treatment Facility (Formerly Cumberland Farms Treatment Facility)

Garelick Farms, LLC (current tax records indicate Dean Dairy Fluid, LLC), 600 Cumberland Street, Block 162, Lot 4.02 is a Significant Indirect User (SIC) that operates a privately-owned wastewater treatment facility. The plant pre-treats industrial wastewater resulting from the processing of fluid milk, frozen fruits, fruit juices and vegetables prior to discharge to the Florence Township sanitary sewer system for additional treatment at the Township's treatment plant. This facility operates under the terms of NJPDES Permit No. NJ0062081-SUI. The plant uses the activated sludge process to treat the dairy wastes. The Garelick Farms Treatment Facility has a permitted discharge of 0.15 MGD.

3. Existing Township Pump Stations

Pump stations are located throughout the Township to provide pressurized flow in sanitary force mains. ***Table VI-11. Inventory of Pump Stations Operated by Florence Township*** below lists the location, date constructed, and capacity of the sanitary pump stations serving the Township.

Table IV-11. Inventory of Pump Stations Operated by Florence Township.

Name	Block	Lot	Built	Location
Keating	98.01	9.01		Behind 1098 Riverview Drive.
Wallace Avenue	111	Behind Lot 1.01		Behind 790 Wallace Avenue.
Norman Avenue	116	8		Next to 261 Norman Avenue.
Main Street	126.01	3		End of Main Street, Behind VFW, Roebling. Next to 105 Main Street.
Hornberger Avenue	141.01	9		Near 1740 Hornberger Avenue. Amboy Pump Station was removed and Hornberger Avenue Pump Station was added to replace it.
Golden Gate	143.06	17	1990	Across from 1330 Maple Avenue. Completed in 1990.
Maple Avenue	146.06	7		Next to 399 Station Road.
Cedar Lane	155.47	21		Next to 261 Cedar Lane at Cedar Lane Water Tower. Upgraded in 2001.
Broad Street	155.48	2		Behind 947 Broad Street. 9th Street Pump Station was removed and Broad Street Pump Station was added to replace 9th Street.
Oak Mill	156.09	23		Seaman Drive and West 5th Street, Oak Mill Estates.
John Galt Way	158	6	2002	1610 John Galt Way (North End of John Galt Way). Completed in 2002.
Route 130	160.01	3.01	2001	Next to 2050 Route 130 South. Completed in 2001.
Cathy Lane	163.01	5		NJ Turnpike Exit 6A.
Crossroads	165.04	33		604 Archibald Lane, Off Wolfe Drive.
Mallard Creek	166	2.01	1999	2142 Route 130 North, Behind Shoppes at Mallard Creek (Suite 6). Completed in 1999.

Source: David Lebak, Florence Township Water and Sewer Director, March 11, 2020.

F. Stormwater Management Plan

1. Tier A Municipal Stormwater General Permit Narrative

The New Jersey Department of Environmental Protection adopted a revised set of stormwater regulations that will affect land development practices within the state. The revised rules take effect on March 2, 2021 and require the use of decentralized green infrastructure practices and provide a more objective review process for projects. Previously, the regulations required the use of nonstructural stormwater management strategies to "the maximum extent practicable." The new rules eliminate the subjective language and provide a clearly articulated, mathematically-based set of standards for stormwater design compliance.

Each Municipality must abide by certain General Permit requirements to reduce discharges of pollutants entering waters from the municipal separate storm sewer system (MS4). Florence Township has a Tier A Permit that addresses stormwater quality issues related to new development, redevelopment, and existing developed areas by requiring the development of a stormwater program. This program is meant to be developed, updated, implemented and enforced. This is done through a Stormwater Pollution Prevention Plan (SPPP) which includes a Municipal Stormwater Management Plan (MSWMP). The MSWMP discusses the strategy, structure and process for addressing stormwater runoff. This includes continuing training for municipal employees, consultants and officials as well as public notice. An annual report and certification must

be submitted to summarize the status of compliance of the permit. The MSWMP should be included in the Municipal Master Plan. The Township has a "Drainage Requirements and Stormwater Management" Ordinance that was adopted in 2005 and a Stormwater Quality Protection Ordinance that was adopted in 2006, however, a new Stormwater Control Ordinance was required to be prepared and adopted to reflect amendments to the Stormwater Management Rules at NJAC 7:8, adopted March 2, 2020.

The Township Engineer's office has been working on complying with the required mapping tasks and the Tier A form has been submitted to NJDEP. All outfalls to basins and stormwater control structures were located in accordance with the new regulations. In addition, inlets that are in the vicinity of road reconstruction projects are retrofitted with grates to keep trash out. Ordinance No. 2020-05, Ordinance to Amend Section 91-75 of the Land Development Ordinance Entitled "Drainage Requirements and Stormwater Management" to Reflect Amendments to the New Jersey Stormwater Management Rules at N.J.A.C. 7:8, Adopted March 2, 2020 was introduced on January 20, 2021 and was adopted on February 3, 2021. Adoption of the Ordinance was advertised on February 7, 2021 and the Ordinance became effective on February 27, 2021. The Township believes they are in compliance with Stormwater Management Rules required to date.